Resource Report 5 – Socioeconomics
AES Sparrows Point LNG Terminal & Mid-Atlantic Express Pipeline

SUMMARY OF REQUIRED FERC REPORT INFORMATION		
TOPIC	**FERC Reference**	**Report Reference or Not Applicable**
1. For major aboveground facilities and major pipeline projects that require an EIS, describe existing socioeconomic conditions within the project area.	§ 380.12(g)(1)	Section 5.3
2. For major aboveground facilities, quantify impact on employment, housing, local government services, local tax revenues, transportation, and other relevant factors within the project area.	§ 380.12(g)(2-6)	Section 5.4

Additional Information

Evaluate the impact of any substantial immigration of people on governmental facilities and services and describe plans to reduce the impact on local infrastructure.	Section 5.4
Describe on-site manpower requirements, including the number of construction personnel who currently reside within the impact area, would commute daily to the site from outside the impact area, or would relocate temporarily within the impact area.	Section 5.4
Estimate total worker payroll and material purchases during construction and operation.	Section 5.4
Determine whether existing housing within the impact area is sufficient to meet the needs of the additional population.	Section 5.4
Describe the number and types of residences and businesses that would be displaced by the project, procedures to be used to acquire these properties, and types and amounts of relocation assistance payments.	Section 5.4
Conduct a fiscal impact analysis evaluating incremental local government expenditures in relation to incremental local government revenues that would result from construction of the project. Incremental expenditures include, but are not limited to, school operating costs, road maintenance and repair, public safety, and public utility costs.	Section 5.4

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Acronyms and Abbreviations

Term	Description
"	inches
°F	degree Fahrenheit
bbl	barrels
bbl/h	barrels per hour
AMSC	Area Maritime Security Committee
ANSI	American National Standards Institute
AOR	Area of Responsibility
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ATWS	Additional Temporary Workspace
BIA	Bureau of Indian Affairs
BIBI	Benthetic index of biotic integrity
BMP	Best Management Practice
BMS	Burner Management System
BOG	boiloff gas
Bscfd / bscfd	billion standard cubic feet per day
Btu	British thermal unit
Btu/(ft2hr)	British thermal unit per feet squared per hour
C5 plus	pentane plus
CCTV	closed circuit television
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
COE	U.S. Army Corps of Engineers
COMAR	Code of Maryland Regulations
COTP	Coast Guard Captains of the Port
CROW	Construction right-of-way
CWA	Clean Water Act
cy	cubic yard
CZMA	Coastal Zone Management Act of 1972
DB&B	double block and bleed
DCS	distributed control system
DMRF	Dredge Material Recycling Facility
Dth/day	Dekatherms per day
EA	Environmental Assessment
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EPC	Engineering, Procurement and Construction
ER	Environmental Report

ERC	emergency release coupling
ESA	Endangered Species Act of 1973
ESD	emergency shutdown
ESD-1	Pier Emergency Shutdown
ESD-1-1	Activation of the unloading arm/vapor return arm ERCs on Berth 1 and Berth 2
ESD-2	Total Terminal Emergency Shutdown
FAA	Federal Aviation Administration
FBE	Fusion-Bonded Epoxy
FEED	Front End Engineering Design
FERC	Federal Energy Regulatory Commission
FERC's Plan	FERC's Upland Erosion Control, Revegetation, and Maintenance Plan
FERC's Procedures	FERC's Wetland and Waterbody Construction and Mitigation Procedures
FM	Factory Mutual
fps	feet per second
ft	feet
gpm	gallons per minute
h	hour(s)
H&MB	heat and material balance
HAZID	Hazard Identification
HAZOP	Hazard And Operability
HDD	Horizontal Direction Drilling
HDMS	Hazard Detection and Mitigation System
HHV	higher heating value
HID	High Intensity Discharge
HIPPS	High Integrity Pipeline Protection System
Hp / hp	horsepower
HP	high pressure
HTF	heat transfer fluid
IESNA	Illuminating Engineering Society of North America
in	inch
inches H2O	inches of water
inches Hg	inches of mercury
inches Hg/h	inches of mercury per hour
IP	intermediate pressure
ISO	International Organization for Standardization
Kts	knots
kV	kilovolt
kVA	kilovolt Ampere (one thousand Volt Amperes)
LDC	Local Distribution Company
LFL	lower flammability limit

LHV	lower heating value
LNG	Liquefied Natural Gas
LNG Terminal	Sparrows Point LNG Import Terminal
LOI	Letter of Intent
LP	low pressure
LTD	Level, Temperature, Density
M&R	Metering and Regulator
m3	cubic meters
m3/hour	cubic meters per hour
MAOP	Maximum Allowable Operating Pressure
mbar	millibar
mbar/hour	millibar per hour
MCC	Motor Control Center
mcf	million cubic feet
MCMERG	Mid-Chesapeake Marine Emergency Response Group
MCR	Main Control Room
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
Mg/l	Microgram per Liter
MIS	Management Information System
MLLW	mean low low water
MLV	Mainline valve
MMBtu/hr	million British thermal units per hour
MMcf/day	million cubic feet per day
MMscfd	million standard cubic feet per day
MP	Milepost
mph	miles per hour
MW	megawatt
N/A	not applicable
NAS Pax River	Naval Air Station Patuxent River
NAVD	North American Vertical Datum
NDE / NDT	Nondestructive Examination / Nondestructive Testing
NEC	National Electrical Code
NEPA	National Environmental policy Act of 1969
NFPA	National Fire Protection Association
NGA / NGPA	Natural Gas Act / Natural Gas Policy Act
NHPA	National Historic Preservation Act of 1969
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
No. ins	number of inches
NOAA	National Oceanic and Atmospheric Administration
NOx	nitrogen oxides

NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWI	National Wetland Inventory
NVIC	Navigation and vessel Inspection Circular
O&M	Operations And Maintenance
OBE	Operating Basis Earthquake
OD	Outside Diameter
OSHA	Occupational Safety and Health Administration
P&ID	piping and instrumentation diagram
PAH	Poly Aromatic Hydrocarbon
PCB	Polychlorinated Biphyenyls
PCMS	Plant Control and Monitoring System
PCR	Platform Control Room
PDEP	Pennsylvania Department of Environmental Protection
PDM	Processed Dredged Material
PIANC	Permanent International Association Navigation Congress
PM	particulate matter
POTW	Publicly-owned Treatment Works
PPB / ppb	parts per billion
PPM / ppm	parts per million
PPT / ppt	Parts per trillion
psf	pounds per square foot
psig	pounds per square inch gauge
PWSA	Preliminary water way suitability assessment
PVC	Poly Vinyl Chloride
QA	Quality Assurance
QC	Quality Control
RGS	Rigid Galvanized Steel (conduit)
ROW	Right-of-Way
RR	Resource Report
RTD	resistance temperature detector
RTU	remote terminal unit
RUSLE	Revised Universal Soil Loss Equation
SAV	Aquatic vegetation
SCADA	Supervisory Control and Data Acquisition
scfh	standard cubic foot (feet) per hour
scfm	standard cubic foot (feet) per minute
SCUBA	Self-contained Underwater Breathing Apparatus

SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SIS	Safety Instrumented System
SPCC	Spill Prevention, Control, and Countermeasure
SSE	Safe Shutdown Earthquake
SSURGO	Soil Survey Geographic
STATSCO	State Soil Geographic
SWPPP	Storm Water Pollution Prevention Plan
Tcf	Trillion Cubic Feet
TCP/IP	Transmission Control Protocol/Internet Protocol,
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
TOC	Total organic carbon
Trap	Pig Launcher Receiver Facility
UL	Underwriters Laboratories
UPS	Uninterruptible Power Supply
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDOE	United States Department of Energy
USDOT	United States Department of Transportation
USEPA / EPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
usg	United States gallons
usgpm	United States gallons per minute
V	voltage
VOC	volatile organic compound
WSA	Water way suitability assessment
WWTP	Waste Water Treatment Plant
§	Section

5. SOCIOECONOMICS

5.1 Introduction

AES Sparrows Point LNG, LLC (Sparrows Point LNG) proposes to construct, own, and operate a new liquefied natural gas (LNG) import, storage, and regasification terminal (LNG Terminal) at the Sparrows Point Industrial Complex situated on the Sparrows Point peninsula east of the Port of Baltimore in Maryland. LNG will be delivered to the LNG Terminal by LNG marine vessels, offloaded from these vessels to shoreside storage tanks, regasified to natural gas on the LNG Terminal site (Terminal Site), and the regasified natural gas transported to consumers by pipeline. The LNG Terminal will have a regasification capacity of 1.5 billion standard cubic feet of natural gas per day (bscfd), with the potential to expand to 2.25 bscfd. Regasified natural gas will be delivered to markets in the Mid-Atlantic Region and northern portions of the South Atlantic Region through an approximately 88-mile, 30-inch outside diameter interstate natural gas pipeline (Pipeline) to be constructed and operated by Mid-Atlantic Express, L.L.C. (Mid-Atlantic Express). The Pipeline will extend from the LNG Terminal to points of interconnection with existing interstate natural gas pipeline systems near Eagle, Pennsylvania. Together the LNG Terminal and Pipeline projects are referred to as the Sparrows Point Project or Project. Both Sparrows Point LNG and Mid-Atlantic Express (hereinafter collectively referred to as AES) are subsidiaries of The AES Corporation.

The Project footprint is located in the counties of Baltimore, Harford, and Cecil in Maryland and the counties of Lancaster and Chester in Pennsylvania. The Terminal Site, which is located entirely within Baltimore County, is a parcel located within a former shipyard. The route proposed for the Pipeline (Pipeline Route), which crosses all of the listed counties, includes industrial, commercial, agricultural, and residential lands. Together, the Terminal Site and the Pipeline Route comprise the Project Area.

As described in Section 1.10 of Resource Report 1, *General Project Description*, The AES Corporation is considering the possibility of building a combined cycle cogeneration power plant (Power Plant) on the Terminal Site. The Power Plant would be configured with one F-Class combustion gas turbine, one steam turbine, and associated auxiliaries. The Power Plant would operate only on natural gas and would produce approximately 300 megawatts (MW) of clean electric power within an area of high energy demand. The Power Plant would be connected to the local utility electric system by an overhead electric power transmission line.

5.2 Objective and Applicability

Resource Report 5, *Socioeconomics*, addresses the socioeconomic conditions present within the Project Area, characterizes the potential socioeconomic impacts associated with construction and operation of the proposed Project and identifies measures to avoid, minimize and/or mitigate such impacts. Figure 5.1-1 illustrates the affected areas of Maryland and Pennsylvania. Section 5.3 addresses the existing socioeconomic conditions in the Project Area. Section 5.4 addresses the potential socioeconomic impacts of construction and operation of the Project. Section 5.5 addresses the potential environmental impacts (including human health, social, and economic) of the Project on minority, low-income, and Native American communities.

The results of the socioeconomic assessment indicate that some temporary impacts would occur due to construction of the Project. However, these impacts are mitigated by the benefits that would occur due to increased employment opportunities associated with construction activities. These positive economic impacts will be related to wages and economic benefits from the increased incomes being spent within the local economies. Additional positive impacts during the construction period will be related to local purchases of equipment, materials, food and supplies. Overall positive impacts are expected during the operation of the Project, including increased employment opportunities associated with operational activities and wages and economic benefits from the increased incomes being spent within the local economies. Long-term positive impacts will also result from projected tax revenues.

5.3 Existing Socioeconomic Conditions

Section 5.3 summarizes the existing socioeconomic conditions in Baltimore, Harford, and Cecil Counties in Maryland, and Lancaster and Chester Counties in Pennsylvania. Sources of information used to identify existing socioeconomic conditions in the Project Area include U.S. Census Bureau demographic data from the most recent official U.S. census (Census 2000) and other Census Bureau information, and the Bureau of Economic Analysis.

The LNG Terminal will be located on a formerly industrial, now mostly vacant, approximately 80-acre parcel situated on the western side of the Sparrows Point Peninsula in Baltimore County, Maryland. The Pipeline will extend approximately 88 miles from the Terminal Site to Eagle, Pennsylvania and will traverse (in geographic order from south to north) Baltimore, Harford, Cecil, Lancaster and Chester Counties.

5.3.1 Population and Housing

Table 5.2-1 provides a summary of demographic and socioeconomic conditions for the counties in the Project Area. The summary table includes current population and population density statistics, per capita personal income, current unemployment rates, rental vacancy rates for temporary housing (e.g., apartment rentals, hotels/motels, and campgrounds), civilian labor force statistics, and the major industry within these counties.

Baltimore County ranks the highest in population density of the five counties traversed (1,260 people/square mile), followed by Chester County, Pennsylvania (573.4 people/square mile), and Harford County, Maryland and Lancaster County, Pennsylvania (roughly equal at about 495 people/square mile). The population density of Cecil County, Maryland is the lowest of the counties traversed (247 people/square mile). Civilian labor forces follow the same trend as population densities among the counties in which facilities associated with the Project will be located.

The number of vacant housing units present in the Project Area is greatest in Baltimore County (13,847). Harford and Cecil Counties each have reported just over 3,000 vacant housing units. Lancaster County has approximately 7,400 vacant units and Chester County nearly 6,000 vacant units.[1]

With the exception of Cecil County, Maryland, vacancy rates for rental units in the Project Area communities are lower than their respective state vacancy rates and the national vacancy rate. Cecil County's rental vacancy rate is 6.8 percent, the same as the national rate. The rental vacancy rate for Maryland is 6.1 percent. For Baltimore and Harford Counties, the rates are 5.7 and 5.5 percent, respectively. Lancaster and Chester Counties in Pennsylvania are reported to have rates of 4.9 and 4.8 percent, respectively, far below that of the State of Pennsylvania, which is 7.2 percent.

The number of vacant housing units for seasonal, recreational or occasional use is nearly 300 units in Harford County, and approximately 1,200 and 1,400 units in Baltimore County and Cecil County, respectively.[2] Lancaster County has approximately 800 vacant seasonal, recreational or occasional use housing units and Chester County has approximately 570. Additional information concerning vacancy

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[1] According to the U.S. Census Bureau, a housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by people who have a usual residence elsewhere are also classified as vacant. A housing unit may be a house, apartment, mobile home, group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall.

[2] According to the U.S. Census Bureau, seasonal, recreational, or occasional use housing units include vacant units used or intended for use only in certain seasons, for weekends, or other occasional use throughout the year. Interval ownership units, sometimes called shared ownership or time-sharing condominiums, are included in this category.

rates is presented in Table 5.2-1, and information concerning vacant housing units is presented in Table 5.3-2.

5.3.2 Local Economy/Workforce Composition

Table 5.2-2 illustrates the local economies and workforce within the proposed Project Area. The summary table includes local economy composition (e.g., mining/agriculture, construction, manufacturing, transportation and public utilities, wholesale trade. retail trade, finance, and government services) and employment within each industry. According to U.S. Census Data, the workforce in Baltimore County is nearly 380,000, and is approximately 112,000 and 43,000 in Harford and Cecil Counties, respectively. The workforces in Lancaster and Chester Counties are similar to one another, at approximately 236,000 and 221,000 each. The reported Pennsylvania workforce (approximately 5.6 million) is greater than that reported for Maryland (approximately 2.6 million).

Based on the number of employed civilians, ages 16 years and older, education, health and social services tends to comprise the highest percentage of the workforce, and appears to uniformly range from approximately 17 percent to 23 percent of the workforce in the counties traversed. Professional, finance, retail, trade and manufacturing all appear to range between approximately 7 percent and 12 percent of the workforce composition with the exception of Lancaster County which is higher in manufacturing (22.5 percent of workforce) than the remaining counties (U.S. Census Bureau, Census 2000 – see Table 5.2-2).

5.3.3 Local Revenues and Sources of Funding

Table 5.2-3 summarizes the local government revenues and sources of funding.[3] The sources of local revenue include taxes and intergovernmental contribution (from state and federal governments). In general, the trends of revenue in nearly all categories rank consistent with population of the counties relative to one another (i.e., Baltimore County tends to be highest, followed by Chester and Lancaster Counties, then Harford and Cecil Counties, across nearly all categories of funding).

5.3.4 Per Capita Personal Income

The per capita personal income is included in Table 5.2-1[4]. The per capita personal income was obtained from 2000 U.S. Census data. The state average per capita personal income for Maryland is $25,614, or 118.6 percent of the national average, which is $21,587. Pennsylvania's average per capita personal income is $20,880, or 96.7 percent of the national average.

The per capita personal income of residents of Harford and Cecil Counties is below that of the State of Maryland. Cecil County's per capita personal income is also below the national average. The per capita personal income of residents of Lancaster County, Pennsylvania is slightly below Pennsylvania's state average and is also below the national average. Baltimore County, Maryland and Chester County, Pennsylvania are above their respective state averages and above the national average per capita personal income.

Related to income are employment and poverty rates. The unemployment rate in Baltimore County was 4.2 percent in the last recorded census (2000), slightly above that of the State of Maryland (3.2 percent) and the U.S. (3.7 percent). The remaining counties have unemployment rates that range between 2 percent and 2.8 percent. Of the counties in which facilities associated with Project will be located, poverty rates are relatively highest in Lancaster and Cecil Counties (7.8 percent and 7.2 percent respectively). Baltimore County has a median poverty rate of the counties traversed at 6.5 percent. Chester County and Harford County have the lowest relative poverty rates at 5.2 percent and

[3] Data presented in Table 5.2-3 was collected from the U.S. Census Bureau and is for the reporting year 1997. The U.S. Census Bureau has collected data more recently (year 2002); however, that data has not yet been compiled and posted on the Census Bureau website.

[4] Per capita personal income is defined as the income received by, or on behalf of, all the residents of a given area. 2000 U.S. Census figures include per capita income data collected for year 1999.

4.9 percent, respectively. The poverty rates in all of the counties in which facilities associated with the Project will be located are lower than both the State of Maryland (8.5 percent) and the U.S. (12.4 percent) poverty rates.

5.3.5 Public Services

The Terminal Site is located entirely within Baltimore County. The Pipeline Route crosses Baltimore, Harford, and Cecil Counties in Maryland, and the counties of Lancaster and Chester in Pennsylvania. Descriptions of public services, including police, fire and emergency services, hospitals and public school systems for these Counties is presented in the subsections that follow.

5.3.5.1 Baltimore County, Maryland

Baltimore County, Maryland has a police workforce of approximately 2,338 officers, averaging approximately 2.98 sworn officers per square mile. Nine precinct stations and four substations are located in the County, with two new precincts under construction. Precinct 12/North Point serves the Sparrows Point area and has a police force of approximately 165 officers.

The Baltimore County Fire Department includes approximately 1,000 career (as opposed to voluntary) emergency response personnel located at 25 fire stations throughout the County. Baltimore County also receives fire protection and emergency response from thirty-three volunteer fire stations. Career Station 57 services Sparrows Point and the surrounding community. Career Station 9 and the North Point/Edgemere Volunteer Station 26 support Edgemere and the surrounding community. The Baltimore County Emergency Medical Services (EMS) operates within the Baltimore County Fire Department, and includes nearly 2,300 EMS providers and paramedics. Medic units are housed in fire stations, and many career and volunteer personnel are trained in both fire suppression and emergency medical services. All emergency apparatus is equipped with mobile radios; medic units are also equipped with mobile data terminals allowing voice and data communications while en route to an emergency scene. In addition, crews are equipped with portable radios to aid personnel safety and emergency scene communications.

The dispatching center, centrally located in Towson, Maryland is a combination center providing service for Police, Fire, EMS and 911 emergency calls. The center is operated 24 hours per day and is managed by 31 emergency communications technicians. A network of eight radio towers positioned strategically throughout the county ensures complete radio coverage for Baltimore County.[5]

Approximately 14 hospitals and medical centers are located in Baltimore County. Medical facilities conveniently located to Sparrows Point and Edgemere include Franklin Square Hospital Center, Fort Howard Veteran's Administration Medical Center and John Hopkins Bayview Medical Center.

The Baltimore County Emergency Operations Plan (EOP) has been developed to foster coordinated emergency response in the event of any type of emergency or disaster that affects lives and property in Baltimore County. The EOP, managed by the Baltimore County Office of Emergency Preparedness, defines the roles and responsibilities of Baltimore County Government, private and volunteer organizations, State and Federal agencies within the county.

Baltimore County Public Schools (BCPS) is the third largest school system in Maryland and the 23rd largest in the United States, serving approximately 108,000 students and employing a staff of nearly 17,000 teaching and administrative professionals. BCPS operates 163 schools, including 103 elementary, 26 middle, and 24 high schools.[6] The Sparrows Point and Edgemere areas are serviced by four elementary public schools, Chesapeake Terrace, Battle Grove, Edgemere and Charlesmont, each offering instruction for pre-kindergarten through fifth grade. Sparrows Point has one middle school

[5] Data obtained from Baltimore County, Maryland Chamber of Commerce website, http://www.baltimorecountymd.gov/Agencies/economicdev/gateway.countygov/firepolice.html
[6] http://www.collegeboard.com/counselors/principals/success/bcps.html

(grades six through eight) and one high school (grade nine through twelve). Sparrows Point Middle School and Sparrows Point High School are Baltimore County's only co-located middle school/high school facility.[7]

5.3.5.2 Harford County, Maryland

Harford County, Maryland includes numerous unincorporated areas and small communities, and has the following three incorporated municipalities: City of Aberdeen, Town of Bel Air, and City of Havre de Grace. Bel Air is the county seat. Three tiers of law enforcement are present in Harford County: the Maryland State Police, the Harford County Sheriff's Office, and the municipal law enforcement agencies of the three incorporated municipalities. The Maryland State Police are located in Bel Air. All areas of Harford County, with the exception of the three municipalities, are served by the Harford County Sheriff's Office, located in Hickory, Maryland.

Fire departments serving Harford County are all staffed exclusively by volunteer firefighters. The majority of these personnel are also trained in various levels of EMS response.[8]

Communities in Harford County are supported by the Upper Chesapeake Medical Center and Harford Memorial Hospital. Trauma patients are typically transported by medivac to John Hopkins Hospital in Baltimore County, Maryland.

The Harford County Public School System serves all residences of Harford County and includes 52 schools. The System serves approximately 39,000 students and employs approximately 2,900 teaching professionals.[9]

The Harford County Division of Emergency Operations and the Harford County Sheriff's Office manage the community's emergency preparedness programs. The Emergency Operations Center is located in Hickory, Maryland and serves as Harford County's combined central facility for fire, EMS, police and hazardous materials response dispatch, in addition to serving as the county's emergency communications staging area.

5.3.5.3 Cecil County, Maryland

Cecil County is a generally rural Maryland county and includes eight incorporated towns. Elkton is the county seat. Law enforcement in Cecil County is provided by the Maryland State Police, the Cecil County Sheriff's Office, and local police departments within the incorporated areas. The Maryland State Police maintain an office, Barrack F-North East, in North East, Maryland. The Cecil County Sheriff's Office is located in Elkton.

Cecil County is protected by 16 fire stations and substations. The majority of firefighters in Cecil County are volunteers, with at least one station employing paid career fire suppression professionals. The county has a county-wide paramedic program, with one station located in each of the following towns: Chesapeake City, Elkton/North East and Colora.

Hospitals in Cecil County include Union Hospital in Elkton, Christiana Hospital in Newark, Perry Point VA Medical Center in Perry Point, and Harford Memorial Hospital in nearby Harford County.

The Cecil County Department of Emergency Services is located in Elkton and is the county's public safety agency responsible for 911 calls, emergency communications, EMS, emergency management operations, hazardous materials response, Homeland Security, and hazard planning and technical support.

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[7] http://maryland.publicschoolsreport.com/district/MD/BaltimoreCountyPublicSchools.html
[8] Information concerning Harford County police, fire and EMS operations provided by the Aberdeen Volunteer Fire Department personnel, telephone: 410-272-2211.
[9] Harford County Public Schools, http://www.hcps.org

Cecil County public schools include 31 schools: 18 elementary schools, six middle schools (grades 6-8), five high schools and two alternative schools. The school systems supports more than 16,000 students with approximately 2,100 employees.[10]

5.3.5.4 Lancaster County

Lancaster County includes one incorporated city, Lancaster, and 18 boroughs and 41 townships. The City of Lancaster is the county seat. The Pipeline Route would traverse a generally small area in Lancaster County, Pennsylvania: Fulton Township and Little Britain Township (Figure 5.1-1).

Two tiers of law enforcement serve Fulton and Little Britain Townships. The Lancaster County Sheriff's Office and Troop J of the Pennsylvania State Police, both located in the City of Lancaster. Fire protection for Fulton and Little Britain Townships is provided by the Robert Fulton Fire Company and the Quarryville Fire Company. The Fulton Fire Company serves all of Fulton Township and approximately 90 percent of Little Britain Township, and is staffed by approximately 55 volunteer firefighters. Quarryville serves the remaining 10 percent of Little Britain and is staffed by approximately 60 volunteer firefighters. Firefighters in both companies are trained in first aid response. The Fulton Fire Company is capable of providing mutual aid to five counties in two states (Maryland and Pennsylvania).

Paramedic EMS response is provided by the Wakefield Ambulance Association in Fulton Township and the Susquehanna EMS in Quarryville.[11]

Sixteen hospitals and medical centers are located in the Lancaster County area. Residents of Fulton and Little Britain Townships are likely to use Lancaster Regional Medical Center for less severe cases or Lancaster General Hospital for trauma cases. Both facilities are located in the City of Lancaster.

The Lancaster County Emergency Management Agency is responsible for coordinating and directing emergency operations for all of Lancaster County. The Lancaster County-wide Communications Center is the centralized 911 dispatch center for the sixty municipalities of the county.

Fulton and Little Britain Townships are part of the Solanco School District, which includes four elementary schools (kindergarten through fifth grade), two middle schools (grades six through eight) and one high school (grades nine through twelve). The Solanco School District has an enrollment of approximately 4,000 students and 471 teachers and support staff.[12]

[10]Cecil County Public Schools 2005 Annual Report, http://pio.ccps.org/AnnualReport/AnnualReport05.pdf.
[11] Information concerning Fulton and Little Britain Township Police, Fire and EMS service provided by Robert Fulton Fire Company, telephone 717-548-8995.
[12] Solanco School District profile, http://www.solanco.k12.pa.us/district_profile.shtml.

5.3.5.5 Chester County, Pennsylvania

Chester County includes 73 incorporated municipalities. The county seat is West Chester, Pennsylvania. The Pipeline Route would be located near approximately 15 township areas of Chester County (Figure 5.1-1).

Police protection is provided by the Chester County Sheriff's Office located in West Chester, and Troop J of the Pennsylvania State Police, who maintains stations in Avondale and Coatesville (the Embreeville Station). Fire protection for Chester County is provided by approximately 87 fire stations and substations located throughout the region. Fire suppression and emergency medical services are provided by volunteer and career (paid) personnel.

Hospitals serving the areas near the Project footprint include Jennersville Regional Hospital in West Grove, Chester County Hospital in West Chester, and Brandywine Hospital and Trauma Center in Coatesville.

The Chester County Department of Emergency Services (DES), located in West Chester, administers and provides for 911 emergency services communications; hazardous materials spill response; disaster planning; fire, rescue and emergency medical services training; Fire Marshal investigations; the Superfund Amendment and Reauthorization Act; and public education programs for the municipalities of Chester County.[13]

Twelve public school districts are located in Chester County.[14] The Pipeline traverses an area that includes approximately six school districts including eight high school level facilities, nine middle schools, and 29 elementary school facilities. The aggregate student enrollment within the six districts is approximately 33,000.[15]

5.4 Project Construction and Operation

The Project will provide a new source of natural gas supply to meet the growing consumer demand in Maryland and throughout the Mid-Atlantic Region. Should construction of the Power Plant proceed, a new source of electric power will also be introduced into the region. As described in this Resource Report, both projects will bring economic benefits to the region.

The Project's components will generate revenue through construction employment and related construction spending, as well as permanent jobs related to the operation of the Project. The amount of revenue expected to be generated by the Project, broken down by components of the Project (LNG Terminal, Pipeline, and, if constructed, the Power Plant), is described in this Resource Report. All components will also have tax generation elements, but these will vary depending on state and local taxing authority; the variations are described herein. Construction material purchases, sales tax on miscellaneous purchases, labor wages to local workers, and construction worker expenditures, will have positive short-term effects during the development and construction phases of the Project. In the operational phase, AES will pay county and local property taxes representing a positive effect of continuing tax revenue generation for the counties in the Project Area. In summary, based on the analysis of employment and spending anticipated to be associated with the construction and operation of the LNG Terminal, the Pipeline, and, possibly, the Power Plant, the Project is expected to have a positive socioeconomic impact on the Project Area.

Construction of the LNG Terminal, including the marine facilities, will take nearly three years to complete. The estimated completion cost of constructing the LNG Terminal, including the marine

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[13] Chester County DES website, http://dsf.chesco.org/des/cwp/view.asp?a=3&Q=609416&desNav=|34528|

[14] Chester County Intermediate Unit, Chester County Public Schools, http://www.cciu.org/FindYourSchoolDistrict

[15] Chester County Intermediate Unit 2005-2006 School Year Directory, http://www.cciu.org/FindYourSchoolDistrict/directory2006.pdf

facilities and the Dredge Material Recycling Facility (DMRF), which is described in more detail in Section 5.4.5 and in Section 1.5.1.2 of Resource Report 1, *General Project Description*, is $400 million. Construction of the Pipeline will take one to two years depending on construction timing restrictions, and will cost approximately $250 million.[16] The Power Plant, if constructed, would take approximately 20 months to complete and would cost approximately $165 million.

Assuming receipt of all required regulatory approvals and permits, construction of the facilities associated with the LNG Terminal would commence in mid-2008. Pipeline construction would commence in 2009. Completion of both aspects of the Project is targeted for 2011. The Pipeline is expected to be completed during one construction season with the use of multiple construction spreads. If restoration is not completed within one season, a winterization plan will be implemented to stabilize and monitor disturbed areas through the winter and subsequent spring thaw. Restoration activities would then be completed no later than the year following construction.

In addition to the new permanent employee positions that will be created to support Project operations, local services and personnel will be required to support Project operations. Indirect activities associated with operation of the LNG Terminal and operation of the Power Plant include: maintenance of facility equipment, calibration services, purchasing of consumables and other supplies, security services, snow removal, and facility maintenance. Indirect activities associated with operation of the Pipeline include: maintenance of the Pipeline right-of-way (ROW), including mowing and brushing, aerial patrolling, snow plowing, and utility services. Resource Report 1, *General Project Description*, contains additional information concerning both the proposed direct and indirect operational activities.

5.4.1 LNG Terminal Construction

5.4.1.1 Estimated Construction Population

It is anticipated that an average of 325 workers would be employed annually during the nearly three-year LNG Terminal construction period.[17] Many of the construction employees will be from within the region, while others will temporarily re-locate to the area. There will be a positive economic impact associated with increased revenues for local businesses (e.g., lodging, transportation, retail) supporting the increased temporary workforce.

A summary of the number of positions associated with construction of the LNG Terminal and the DMRF, annual salary range for those Project components, and estimated payroll associated with those Project components is shown in Table 5.3-1. The estimated multiplier effect on local economies is also included in the table.

[16] The crossing of environmentally-sensitive resources (e.g., waterbodies with fisheries) and in agricultural lands (i.e., topsoil management) will be in accordance with state timing restrictions where applicable. This may require the use of pipeline tie-in crews to work out of sequence with the scheduled construction activities of the main construction spread. Information concerning construction of the individual components of the LNG Terminal and Pipeline, as well as the Project schedule, can be found in Resource Report 1, *General Project Description*.

[17] Construction projects are begun with relatively few workers, then ramp to a peak workforce, then back down in bell-shape fashion. For example, work would begin on the project with 15 to 20 management personnel, ramp to a peak of almost 700, then gradually decline to the point where the operations staff would take over.

5.4.1.2 Construction Employment and Payroll

A temporary positive impact on local employment in the Baltimore County region is expected to result from construction of the LNG Terminal. When available, local workers will be employed for construction. Some positions will require specialized skill sets, and where such specialists are unavailable locally, employment will come from elsewhere in Maryland and Pennsylvania, as well as Virginia and other Mid-Atlantic states. It is expected that local workers will be primarily hired for positions such as equipment operators, truck drivers, and general construction labor. If needed, a small number of specialized workers will be brought into the region by the prime contractor(s) based on skills needed.

Employment of local construction workers should have a positive effect on the construction component of unemployment rates during the construction season. As shown in Table 5.2-1, unemployment rates within the affected counties range from 2.0 percent to 4.2 percent. The unemployment rate for Baltimore County, where the LNG Terminal facilities will be constructed, is above the state and national unemployment rates. The remaining four counties in the Project Area experience unemployment rates below their respective state rates and the national rate. (U.S. Census Bureau, Census 2000). This may compel use of some construction employees from outside the region to support Pipeline construction.

The salary range for the construction jobs associated with construction of the LNG Terminal is expected to be approximately $25,000 to $150,000 annually, generating an average of $18.4 million in annual personal income earnings during the Project construction period. *See* Table 5.3-1[18].

A summary of the number of positions associated with the LNG Terminal construction, annual salary range, and estimated payroll is shown in Table 5.3-1. The multiplier effects on local economies are also included in the table and are based on information from the Bureau of Economic Analysis and comparison with multipliers for a similar project at Cove Point.

The economic impact analysis conducted for a similar energy infrastructure project, the Dominion Resources Cove Point LNG facility (2004), located in Calvert County Maryland, concluded that a direct effect earnings multiplier of 2.2 would result from expansion of the facility. Using a slightly more conservative estimate of 2.0 for the Project and a combined payroll for the construction period associated with the LNG Terminal, including the DMRF, of $59.2 million, the estimated ripple effect on local economies over the construction duration would be $118.44 million.

5.4.1.3 Housing

AES anticipates approximately 40 percent of the LNG Terminal construction workers will temporarily relocate to areas in close proximity to the Terminal Site. Non-local construction workers will temporarily reside at various locations within the local area. Because AES will not provide housing or dictate commuting distance, the areas in which workers will seek temporary housing cannot be identified or qualified. Workers will choose housing based on personal preference; however, they are likely to reside within short commuting distances of the construction site areas. Most construction workers relocating near the proposed Project Area are anticipated to opt for temporary housing such as hotels, motels, and rental housing units, and therefore not compete with the permanent housing needs of the new workers coming into Maryland as a result of the U.S. Department of Defense Base Realignment and Closure (BRAC) plan. The temporary increase in demand for lodging in the Project Area during LNG Terminal construction will extend for the duration of construction of the LNG Terminal, with likely seasonal highs.

As shown in Table 5.3-2, an adequate number of lodging establishments appear to exist within the Project Area, and are expected to be sufficient for the Project construction crews. Short-term

[18] Annual payroll is estimated based on the average number of employees per year, estimated staff profile, and range of salary values for the range of staff positions.

hotel/motel shortages may exist in tourist areas and may compel construction workers to find housing at somewhat greater distance; however, it appears that the existing temporary housing should be adequate to meet the demands required by the construction workforce. Table 5.3-2 contains the U.S. Census data regarding the availability of vacant housing in the counties near the Terminal Site.

5.4.1.4 Public Services

LNG Terminal construction may temporarily impact public services. However, AES plans to minimize the impact on fire, rescue, and police forces through training and close cooperation of AES contractors with these emergency response forces.

AES will require successful contract bidders to contact fire departments and emergency response agencies prior to the start of construction. Through these meetings, AES intends to establish a relationship between the contractors and the emergency response organizations. This relationship will explore and plan timely response options and facilitate response coverage in case of an accident or injury. It is expected that no additional governmental expenditures for emergency or security services will be required during the construction period as this industrialized area of Baltimore County seen numerous construction projects over the years.

AES does not anticipate LNG Terminal construction impacting school or healthcare facility operating costs. Due to the duration of the construction phases of the LNG Terminal, it is anticipated that the non-local workers temporarily working in the Project Area will not relocate their families.

AES expects that the short-term spending generated by LNG Terminal construction will create significant tax revenue in the vicinity of the Project Area. Short-term spending includes money spent on food, entertainment, recreation, housing, and miscellaneous purchases. It is expected that non-local workforce will stay in lodging with an estimated $110 per night rate.[19] Based on approximately 40 percent of the LNG Terminal facilities construction workforce temporarily relocating to the area near the Terminal Site, the cumulative revenue generated in local sales of lodging is anticipated to be approximately $14,300 per night. During the 78 weeks of peak construction, the LNG Terminal construction is expected to generate approximately $5,577,000 in revenues for hotels alone, plus food and other incidental purchases. The local taxes paid by these establishments will provide some offset of burden that may be created by the short-term use of public services.

5.4.1.5 Transportation

The alignment sheets included with Resource Report 1, *General Project Description*, Appendix 1A, indicate the road and rail crossing locations and crossing techniques. AES has initiated contacts with local public works departments and Maryland highway agencies and will, prior to construction and in concert with its contractors, establish detours where needed and will provide sufficient notice and signs on roadways that will be affected. Use of state highway information systems such as Maryland's CHART system will be available to help disseminate information to motorists on Maryland roadways, if needed. Resource Report 1 contains additional information concerning types of roadways crossed, construction methods, and construction duration.

Transportation to the LNG Terminal construction site will be facilitated to minimize traffic. Construction will occur primarily during daylight hours; therefore, the peak construction traffic is expected from 6:00 a.m. until 6:00 p.m., Monday through Saturday. The communities near designated construction worker parking areas may experience heavy traffic during the beginning and end of the construction shift, but the duration of peak staffing is short-lived. Traffic associated with the LNG Terminal construction will have far less of an impact than that of the steel plant adjacent to the Terminal Site. Mittal Steel, formerly Bethlehem Steel, was once the largest steel mill in the world,

[19] Baltimore County Conference and Visitors Bureau, June 2006.

with estimates ranging from 26,500 to 33,000 employees commuting to its worksite daily in the 1950s and 1960s.[20] Current steel mill employment is in the range of 2500 employees.[21]

During peak traffic periods, local communities may also experience minor and temporary negative impacts from delivery trucks and the movement of construction equipment. AES will instruct its contractor(s) to coordinate these activities with local highway departments and law enforcement to minimize the impact on surrounding communities. In addition, if damage does occur to roadways as a result of this project, AES will repair (or bond for repair of) those roadways to their previous condition.

Maryland's water and air transportation systems will also be considered in the planning phase of the Project including extensive interaction with maritime interests associated with the Port of Baltimore and commercial and civilian air traffic to and from Baltimore-Washington International Thurgood Marshall Airport, Martin State Airport and local airports through the Maryland Aviation Administration and the Federal Aviation Administration.

5.4.1.6 Economic Value of Removal of Agriculture/Pasture Land or Timberland from Production

Construction of the LNG Terminal onshore facilities is expected to have no impact on agricultural/pasture land or timberland production, as the construction will occur at a vacant shipyard, which is a previously developed site. Construction of the LNG Terminal facilities will improve the existing, former industrial site.

5.4.1.7 Displacement of Residences or Businesses

No residences or businesses are anticipated to be displaced by construction of the LNG Terminal.

5.4.1.8 Impact on Local Tourism

In 2004 there were 230,537 tourism related jobs in Maryland. Of these, 11.91 percent (27,447) were in the City of Baltimore, 13.64 percent (31,449) were in Baltimore County, 1.45 percent (3,347) were in Cecil County, and 3.39 percent (7,827) were in Harford County. The 2004 tourism payroll for Baltimore City was approximately $566 million, and for Baltimore County was approximately $578 million. The tourism payrolls for Cecil and Harford Counties were approximately $50 million and $96 million, respectively.[22] AES recognizes the importance of tourism to this region and will take the necessary precautionary steps to ensure that Project activities will have the least possible impact on local tourism by maintaining clean and orderly worksites, routing construction traffic, to the extent feasible, around any major tourist areas of interest, and scheduling construction activities around major holidays.

5.4.1.9 Impact on Community Development

Portions of a report titled *Dundalk, A Second Century Vision* (Dundalk Report) were submitted by an interested party during the Federal Energy Regulatory Commission (FERC) scoping process. The report was prepared by the Baltimore County Office of Community Conservation and the Office of Planning. The Dundalk Renaissance Corporation was also involved with the effort. The Dundalk Report, which identified a plan that represents a roadmap to possible futures for Dundalk over the next 100 years, was adopted as a component of Baltimore County's Master Plan in February 2000. The multi-faceted strategy for re-development identified three main projects. All of those projects are

[20] See "Feeling Pressure for Profits" and "Sparrows Point Sale Possible", Articles by Allison Connolly, originally published in the *Baltimore Sun*, May 14, 2006 and June 1, 2006, respectively; Significant Events in the History of Sparrows Point High School & Community, http://www.myedgemere.com/sphs_&_community.htm.; and Point Steel Workers History, http://www.sparrowspointsteelworkers.com/html/history.html

[21] Baltimore Daily Record, 6 July 2005

[22] Hospitality and Tourism, Maryland Department of Labor Licensing and Regulation, May 2006.

located on the north side of the Francis Scott Key Memorial Bridge (Key Bridge), i.e., none of the proposed projects – whether considered long-term or short-term – is located in areas that would conflict with the construction or operation of the Project. These proposed development projects and their locations relative to the Terminal Site are shown on Figure 5.4-1. Indeed, a key component of the Dundalk Report is the belief that "a brighter future for Dundalk lies in establishing closer ties – physically and socially – with Baltimore City." Baltimore City is located in the opposite direction from Dundalk as is the Terminal Site. Accordingly, due to the Terminal Site's remote distance from the Dundalk community, and the physical barrier between the Terminal Site and Dundalk presented by the Key Bridge and Interstate Highway 695 (I-695), construction and operation of the Project will have no negative impact on those proposed projects or any other revitalization efforts described in the Dundalk Report.

The Turner Station Community Conservation Plan (TSCC Plan) was introduced by an interested party during the scoping process. The TSCC Plan identified numerous opportunities and challenges facing the Turner Station community, which, in its location immediately north of the Key Bridge, is the nearest residential community to the Terminal Site. The major challenge claimed for the community "is to embark on a redevelopment effort that strikes a healthy balance between preserving its unique charm and history, while at the same time maximizing upon its potential as a desirable, waterfront community that is a destination for both old and new residents, businesses and institutions." The redevelopment / revitalization concepts considered in the TSCC Plan include improvements to the Turner Station waterfront, promotion of heritage preservation within the Turner Station community, identification of historical sites within the community, remediation of housing violations within the community, improvements to infrastructure and traffic within the community, formation and/or improvement of community service programs, participation in shoreline enhancement programs with the Maryland Department of the Environment at specific locations within the community, formation of public safety programs for residents, businesses, and institutions, within the community, improvements to recreation facilities within the community, and attention to community appearance / beautification programs. The TSCC Plan defines the community boundaries as consisting of approximately 200 acres stretching from Dundalk Avenue on the north to I-695 and the Key Bridge on the south. Construction and operation of the Project will have no negative impacts on the community redevelopment / revitalization concepts contained in the TSCC Plan due to the distance of the LNG Terminal from the Turner Station community. This distance is well defined by the physical barriers between the Turner Station community and the Terminal Site presented by Bear Creek, I-695, and the Key Bridge. None of the concepts presented in the TSCC Plan involves activities south of I-695 with the exception of the dredging project at Soller Point. None of the activities proposed in the TSCC Plan is on the Sparrows Point Peninsula or in the vicinity of the Terminal Site or the Brewerton Channel in the Patapsco River. These key developments and their locations relative to the Terminal Site are shown on Figure 5.4-1.

Portions of the Baltimore County Master Plan 1989-2000, as amended July 27, 1989, (BC Plan) were introduced by an interested party during the FERC scoping process. The portions introduced included those BC Plan sections dealing with the eastern side of Baltimore County, which is where the LNG Terminal is proposed to be located, and certain BC Plan amendments. The BC Plan identifies the area of the proposed Terminal Site as industrial (for purposes of land use), as an industrial employment area (for purposes of development policy), and as high ground with pollution potential (for purposes of environmental policy). The BC Plan also encourages the re-use of land at Sparrows Point for redevelopment for new industrial purposes. Construction and operation of the Project is entirely consistent with the BC Plan both as introduced by the interested party and as currently in effect.[23]

5.4.1.10 Materials Purchases

In addition to the construction payroll associated with the LNG Terminal, new sales tax revenue to state and local governments will be generated as a result of the spending of millions of dollars on materials, equipment and supplies.

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[23] The latest Baltimore County Master Plan (Master Plan 2010) was adopted by the Baltimore County Council on February 22, 2000.

Much of the construction materials associated with the LNG Terminal will be supplied by local suppliers. AES expects to obtain many of its products and services from manufacturers and or distributors in the Mid-Atlantic Region. In addition, local retailers will benefit from the general contractor's purchase of materials such as fuel, stone, sand, concrete, etc. Following construction, AES will continue to purchase materials and services for routine operation and maintenance of the LNG Terminal and the Terminal Site. AES expects construction material purchases, construction payroll and construction worker spending, to result in a positive economic impact on the communities near the Terminal Site.

5.4.1.11 Property Values

In order to assess the potential economic impacts of construction and operation of the LNG Terminal on local properties, a comprehensive review of studies conducted on projects similar to the LNG Terminal was performed. Information presented in the research literature reviewed generally addresses two types of facilities: fixed and linear. Fixed facilities are those such as the proposed LNG Terminal (and Power Plant), while linear facilities are similar to the proposed Pipeline. Such facilities not only differ in form (e.g. fixed versus linear), but in land occupancy, facility construction and function. Their potential impacts on property value are, therefore, evaluated differently in the published case studies. A discussion on the potential impact on property values associated with LNG Terminal facilities is presented below. That discussion, because it deals with fixed facilities, parallels the discussion on the potential impact on property values associated with the Power Plant presented in Section 5.4.3.11. Information pertaining to potential property value impacts associated with construction and operation of the proposed Pipeline is presented in Section 5.4.2.10.

A 1993 study conducted by the Argonne National Laboratory examined the economic impacts of the presence of "noxious" facilities on local wages and property values. Noxious facilities include both those facilities that may cause harm to human health or the environment and those where there is a perception of such adverse impacts. Eight types of these facilities were studied: nuclear power plants; coal-, gas-, or oil-fired power plants; military chemical weapons sites; hazardous waste sites; refineries; chemical weapons storage facilities; former storage sites that are now contaminated; and LNG facilities. The study examined the effects of 262 facilities that were identified to be included in the analysis on standardized 1,000 square-mile areas across the United States. Eleven of the identified facilities were LNG facilities. The conclusions of the study indicated that five of the eight types of noxious facilities had a significantly negative impact on property values but a positive effect on wages; however, the study concluded the presence of an LNG facility had neither a significant positive or negative effect on either wages or property values (FERC, 2005).

As discussed in the Final Environmental Impact Statement for an LNG terminal in Fall River, Massachusetts, a real estate study was performed by the Real Estate Counseling Group of Connecticut, Inc. (RECG). In 1995, RECG contacted local tax assessors in four New England communities in close proximity to existing LNG storage facilities in Haverhill, Ludlow, and South Yarmouth, Massachusetts, and Tilton, New Hampshire, as well as communities where LNG storage facilities had recently been built (North Carolina, Georgia, and Indiana). RECG asked the following questions: (1) whether they had received property owner requests for lower valuations due to the presence of an LNG facility; and (2) whether the presence of a storage tank was a factor they considered in doing their valuations. The study concluded that in no case did the planned LNG facilities play a role in the assessments. The study further concluded that no requests for lower valuations had been made or granted (FERC, 2005).

In a 2002 study of property values in areas proximate to an existing LNG peak-storage facility in Fall River, Massachusetts, results indicated that the Fall River LNG facility had not deterred residential development in surrounding areas. Several new homes had been constructed in the vicinity of the facility since its activation in 1970; a condominium project was scheduled to be constructed next to the facility; and recent sales in the area indicated that property values or price increases had not diminished due to the facility (Giroux, 2002).

In March 2006, AES commissioned a study of real estate values in the area of the Cove Point LNG terminal in Calvert County, Maryland (Carson, 2006). The Cove Point facility is very similar to that proposed by AES with the exception that the Cove Point facility uses single-containment tanks and the ship unloading facilities are located offshore.[24] At the time the study was commissioned, the Cove Point facility was in the process of applying for a proposed expansion in which public notice was required. The study consisted of reviewing six years of home sale prices (residential sales price data from 1999 to 2005) in the neighborhoods adjacent to the Cove Point facility and comparing those prices to sale prices of homes in Calvert County over the same period. The results of the study indicated that housing prices in southern Calvert County had been rising steadily in recent years, and the prices of the homes in Cove Point Beach, Cove of Calvert, Cove Point Woods, and Chesapeake Cove Estates (the residential communities closest to the Cove Point facility) had been rising at rates that are consistent with the overall price rise of homes in southern Calvert County. To evaluate in a normalized fashion the data for the Cove Point area, AES compared the real estate value appreciation for the Cove Point residential areas to comparable residential areas in Calvert County taking into account similarity of housing stock, access to roads, commerce, retail, etc. The comparable area was not in the immediate vicinity of the Cove Point LNG facility; rather, it was (depending on the actual physical location of the residential housing that was being compared) areas located approximately five to twelve miles away. The comparison of value appreciation of representative properties in the comparable area evaluated over the same period (1999 to 2005) indicated that the property appreciation near Cove Point was approximately 86 percent, while the average property appreciation of similar representative properties five to twelve miles away was approximately 90 percent. The difference in appreciation values for the two areas, approximately four percent, is viewed as expected variation in the data sets. Based on this comparison, the presence of the Cove Point LNG terminal has had little to no impact on property appreciation in the vicinity of the terminal.

Based on existing publicly available information, LNG facilities have neither a negative nor a positive affect on property values. AES anticipates that property values in the vicinity of the Terminal Site will continue to change based on real estate factors extant in the communities near the LNG Terminal, but would not be influenced significantly, either negatively or positively, as a result of development of the LNG Terminal.

5.4.1.12 Homeowner Insurance

As stated in the Final Environmental Impact Statement on the Crown Landing LNG and Logan Lateral Projects (Docket Nos. CP04-411-000 and CP04-416-000) (April 28, 2006), the FERC Staff found that:

> Homeowner insurance rates are generally set on a county-wide basis, with individual rate adjustments made to reflect the age and value of the property and the claims record of the owner; insurance rates are not based on the surrounding landscape or structures at the local level. Properties in the vicinity of an industrial facility may be older and not as well maintained, which can affect the availability of insurance coverage or the insurance rates.

Based on this, it is not anticipated that the presence of an LNG Terminal would affect the insurance rates of nearby residences.

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[24] The LNG Terminal will consist of full-containment storage tanks and a shoreside unloading facility. The shoreside unloading facility associated with the Project will be located approximately the same distance away (actually slightly more) from the nearest residential housing as the offshore unloading facility associated with Cove Point. Distance from the nearest residential area to the single-containment LNG tanks at Cove Point is significantly closer than the distance from the full-containment LNG tanks at the LNG Terminal to the nearest residential area in Turner Station.

5.4.1.13 Tax Revenues

Personal income tax rates for the Year 2006 in the State of Maryland range from 2.0 percent to 4.75 percent. The City of Baltimore and the counties of Maryland assess local "piggyback" income taxes at rates between 1.25 percent and 3.2 percent of Maryland taxable personal income. These additional taxes are levied by counties to generate revenue necessary to support local governments. Local personal income taxes for Baltimore, Harford, and Cecil Counties are 0.0283 percent, 0.0306 percent and 0.0280 percent, respectively.

Pennsylvania's personal income tax rate is 3.07 percent. Pennsylvania does not levy or collect taxes on real estate or personal property. Pennsylvania municipalities (cities, townships, and boroughs) are permitted to levy real estate property taxes that cannot exceed 30 mills on the assessed value of the property without special permission of the courts.

Property in Maryland is also subject to property tax. Assessments are determined on a fair market value basis, issued by the Department of Assessments and Taxation. Cities and counties can set tax rates at the level they deem necessary to fund governmental services. These rates can increase, decrease, or remain the same from year to year.

The overall tax revenue anticipated to be generated from the construction and operation of the LNG Terminal will have a significant positive socioeconomic impact in the vicinity of the Project Area. AES estimates that AES will pay approximately $2 million in Maryland and Pennsylvania taxes each year during the construction of the LNG Terminal and the Pipeline. An additional $14.1 million will be generated annually during the operation of the LNG Terminal and the Pipeline from spending associated with locally purchased equipment, services and supplies. Table 5.4-2 contains a summary of projected state tax revenues associated with construction and operation of the LNG Terminal and the Pipeline.

5.4.2 Pipeline Construction

5.4.2.1 Estimated Construction Population

Construction of the Pipeline will take approximately 12 to 14 months (Pipeline construction alone; restoration of the Pipeline ROW will potentially require longer), with completion of the Pipeline approximately coinciding with completion of the LNG Terminal.

Approximately 200 workers (annual average) would be employed over the duration of Pipeline construction.

5.4.2.2 Construction Employment and Payroll

There will be a temporary positive impact on local employment due to construction of the Pipeline facilities. When available, local workers will be employed for construction. Some positions will require specialized skill sets, for example welders and pipe fitters. Where such specialists are unavailable in the vicinity of the Project Area, employment will come from elsewhere in Maryland, Pennsylvania, or other states. It is expected that local workers will be primarily hired for positions such as equipment operators, truck drivers, and general construction labor. Specialized workforce will be brought into the region by the prime contractor(s) based on skills needed within each spread and construction location. Experienced pipeline construction companies capable of constructing this project are located within Maryland and neighboring states.

Where possible, local construction workers will be employed, which should reduce unemployment rates during the construction season. However, this effect will be short-term during construction. Once the construction season ends, it is anticipated that unemployment will return to pre-construction rates, with the exception of pipeline and operation services typically performed by local contractors.

As shown in Table 5.2-1, unemployment rates within the affected counties ranges from 2.0 percent to 4.20 percent (U.S. Census Bureau, 2000).

Annual personal income earnings associated with construction of the Pipeline are anticipated to be $11.3 million during the construction period[25]. Using the conservative estimate of a 2.0 direct effect earnings multiplier, construction of the Pipeline could result in a $22.6 million ripple effect for the local communities. A summary of the number of positions associated with Pipeline construction, annual salary range, and estimated payroll is presented in Table 5.3-1.

5.4.2.3 Housing

AES anticipates 50 percent of the Pipeline construction workers will temporarily relocate to the Project Area. Non-local pipeline construction workers will temporarily reside at various locations within the local area. Because AES will not provide housing or dictate commuting distance, the areas in which workers will seek temporary housing cannot be identified or qualified. Workers will choose housing based on personal preference; however, they are likely to reside within short commuting distances of the construction site. Most construction workers relocating to the vicinity of the Project Area are anticipated to opt for temporary housing such as hotels, motels and rental housing units. Due to the nature of Pipeline construction and the fact that AES will be using multiple construction spreads, the construction periods will be relatively short and construction crews will pass through the areas rapidly, thus minimizing the temporary housing impact in any one area along the Pipeline Route. According to Table 5.3-2, an adequate number of lodging establishments exists within the area of the Pipeline Route that will be sufficient for the Pipeline construction crews. Short-term hotel/motel shortages will likely not exist in tourist areas. AES believes that the existing temporary housing should be adequate to meet the demands required by the Pipeline construction workforce.

5.4.2.4 Public Services

Pipeline construction may impact public services. However, AES plans to minimize the impact on fire, rescue, and police through training and close cooperation of AES contractors.

AES will require successful contract bidders to contact fire departments and emergency response agencies prior to the start of construction. These meetings should help to establish communication between AES, and its contractors, and the emergency response organizations. Through these meetings and communications with the emergency response organizations, AES and its contractors will explore timely response options and facilitate response coverage in case of an accident or injury.

AES does not anticipate Pipeline construction having any significant impact on school or healthcare facility operating costs. Due to the short duration of the construction phases of the Pipeline, it is anticipated that the non-local workers temporarily working in the Project Area will not relocate their families.

AES expects that the short-term spending generated by the Pipeline will create significant tax revenue within the area of the Pipeline Route. Short-term spending includes money spent on food, entertainment, recreation, housing, and miscellaneous purchases. It is expected that non-local workforce will stay in lodging with an estimated $103 per night rate[26]. Based on approximately 50 percent of the Pipeline construction workforce temporarily relocating to the area of the Pipeline Route, the cumulative revenue generated in local sales of lodging is anticipated to be approximately $10,300 per night. During the 44 weeks of peak construction activities associated with the Pipeline, approximately $2,266,500 in revenues for hotels alone, plus food and other incidental purchases, are

[25] Annual payroll is estimated based on average number of employees per year, estimated staff profile, and range of salary values for the range of staff positions.

[26] Averaged figure based on lodging rates obtained 2006 from Harford County Chamber of Commerce (phone: 800-682-8536); Cecil County Tourism Board (phone: 410-996-6292); Lancaster County Visitors Bureau (phone: 800-723-8824); Chester County Visitors Center (phone: 800-228-9933).

expected to be generated. The local taxes paid by these establishments should help to offset any burden that might be created by the short-term use of public services.

5.4.2.5 Transportation

The alignment sheets included with Resource Report 1, *General Project Description,* Appendix 1A indicate the road and rail crossing locations and crossing techniques. AES plans to minimize the potential impact to Maryland and Pennsylvania transportation systems by boring under major highways, railroads, and some paved roads to avoid interruption of traffic flow on the roadways crossed. AES will initiate contacts with local public works departments and state highway agencies and will, prior to construction and in concert with its contractors, establish detours where needed and will provide sufficient notice and signs on roadways that will be affected. Use of state highway information systems such as Maryland's CHART system will be available to help disseminate information to motorists on Maryland roadways. Resource Report 1 contains additional information concerning types of roadways crossed, construction methods, and construction duration.

Workers for the Pipeline portion of the Project will park vehicles at pipeyards, staging and warehouse areas, and along access roadways. Transportation to the construction site will be facilitated to minimize traffic. Construction will occur primarily during daylight hours; therefore, the peak construction traffic is expected from 6:00 a.m. until 6:00 p.m., Monday through Saturday. The communities near the designated parking areas may experience heavy traffic during the beginning and end of the construction shift, but the duration of peak staffing is short-lived and progresses geographically along the Pipeline Route with Pipeline activities.

During peak traffic periods, communities may also experience minor and temporary negative impacts from delivery trucks and the movement of construction equipment. At this time, it is not possible to quantify the number of trips anticipated or determine when deliveries are likely to occur. AES will instruct its contractors to coordinate these activities with local highway departments and law enforcement to minimize the impact on surrounding communities. In addition, if damage does occur to roadways as a result of the Project, AES will repair (or bond for repair of) those roadways to previous or improved condition.

Access roads will be necessary during construction activities to provide temporary access to the construction ROW in addition to public road access. To the extent possible, existing access roads will be used for this purpose. In some instances, improvements will be necessary (e.g., widening and reinforcing). Once temporary access roads are no longer necessary, they will be returned to their as-found condition or better, subject to provisions of applicable permits and landowner agreements. Access roads will be designed and constructed in accordance with local and state standards and codes (e.g., with respect to specifications, materials, adequate drainage).

5.4.2.6 Economic Value of Removal of Agriculture/Pasture Land or Timberland from Production

Any impacts to agriculture/pasture land or timberland will be temporary, except on the permanent ROW. Agricultural/pasture land will be restored to pre-construction production capacity. The permanent ROW on timberland will require that no timber crop be re-established over the Pipeline and will therefore reduce production of timber in some areas. The Pipeline alignment has been selected to avoid timber resources to the maximum extent feasible, and therefore routing has already minimized the potential for impact to such resources. The temporary and permanent agriculture/pasture land and timberland that will be affected by the Project are summarized in Resource Report 8, *Land Use, Recreation and Aesthetics*. AES will negotiate with landowners to provide fair compensation for loss of production in agricultural/pasture land and timberland due to the Pipeline construction and operation.

Potential for impacts to timber have been minimized through the Pipeline Route selection process. Marketable timber removed during clearing of the ROW will be cut to standard lengths and stacked at

the edge of the ROW or removed. AES will coordinate with the landowners prior to construction and provide compensation for crop damages.

5.4.2.7 Displacement of Residences or Businesses

Construction may impact residences and businesses along very limited portions of the Pipeline construction ROW. Resource Report 8, *Land Use, Recreation and Aesthetics*, contains a summary of residences located within the proposed temporary construction ROW. For any residence affected, a Residential Mitigation Plan will be prepared. Impacts to residences and businesses would be temporary.

5.4.2.8 Impact on Local Tourism

In 2003 there were 555,442 tourism related jobs in Pennsylvania. Of these, 12.07 percent (28,549) were in Lancaster County, and 5.78 percent (12,100) were in Chester County. The 2003 tourism payrolls for the counties of Lancaster and Chester were approximately $833 million and $349 million respectively.[27] AES recognizes the importance of tourism to this region, and will seek to ensure, to the maximum extent practicable, that Pipeline construction activities will have the least possible impact on local tourism. Proposed measures include maintaining clean and orderly worksites, routing construction traffic, to the extent feasible, around any major tourist areas of interest, and scheduling construction activities around major holidays.

5.4.2.9 Materials Purchases

In addition to Pipeline construction payroll, the Project will generate new sales tax revenue to state and local governments associated with the spending of millions of dollars on materials, equipment and supplies.

Pipeline construction materials will be supplied by a wide array of local suppliers. AES expects to obtain many of its products and services from manufacturers and or distributors in the Mid-Atlantic Region. In addition, local retailers will benefit from the general contractor's purchase of materials such as fuel, stone, sand, concrete, seed, hay/straw, fertilizer, wood and welding supplies. Following construction, AES will continue to purchase materials and services, including ROW maintenance services such as mowing and brushing, aerial patrolling, snow plowing and utilities services. AES expects construction material purchases, construction payroll and construction worker spending, to result in a positive economic impact on the communities in the area of the Pipeline Route.

5.4.2.10 Property Values

As discussed in Section 5.4.1.11, published case studies dealing with linear facilities were considered in evaluating the potential impact on property values associated with construction of the Pipeline. Those studies are summarized below.

Since the late 1970s, studies using hedonic methodologies have been used to estimate the effect of environmental factors on property values. Hedonic property value models can be used to derive point estimates for identifying the relationship between environmental quality and property prices. It should be noted that variables reflecting different perceptions about environmental quality may result in implicit prices that vary substantially. See reference list attached (Michael, Boyle and Bouchard, 2000).

These studies have included such environmental variables as nuclear power plants, chemical plants, power plants, and pipelines carrying products defined as hazardous. Specific to pipelines, studies indicate that, in the absence of an attention-focusing event, a pipeline has neither a positive or negative

[27] Data derived from Economic Impact Report of Travel in Pennsylvania 2002-2003 (http://media.experiencepa.com/statistics/PATourismImpact2003and2003.pdf)

affect on property values. However, where an attention-focusing event has occurred, post-event property values have shown a localized and temporal devaluation (Hansen, Benson, and Hagen, 2006).[28] This temporal devaluation is discussed below.

Studies have historically focused on the proximity of the property to the perceived hazard. In such studies it has been shown that immediately following the attention-focusing event, property values can be undervalued; however, until recently these studies have failed to consider the effects of time and changing conditions (e.g., people moving in and out of the area). Previous research regarding the perceived environmental risk, proximity to pipelines, and property values has not addressed the persistence of these discounts over time.

Hansen, et. al. evaluated property sales near two pipelines in Bellingham, Washington using hedonic methodologies that looked at both proximity and persistence over time. Both pipelines considered in the study carry liquid fuel defined to be hazardous. One of the pipelines had an incident (i.e., spill) during the studied time frame. In comparing property values near each of the pipelines, both before the incident and after, the authors found that the mean price for properties did decline, but those impacts diminished as the distance from the pipeline increased. Additionally, home prices regained their expected value as time passed after the incident. The data suggests that the maximum price decrease, within 50 feet of the pipeline at which the incident occurred, was less than 5 percent of the property's estimated value. At distances greater than 1,000 feet, little (0.2 percent) or no influence to property value was expected (Hansen, et. al., 2006).

AES will seek to negotiate fair market value compensation for landowners whose property is crossed by the proposed Pipeline. Professional, third-party appraisers will research comparable property sales to provide AES a basis for calculation of compensation.

5.4.2.11 Homeowner Insurance

As described in section 5.4.1.12, homeowner insurance rates are generally set on a county-wide basis, with individual rate adjustments made to reflect the age and value of the property and the claims record of the owner; insurance rates are not based on the surrounding landscape or structures at the local level. It is not anticipated that the presence of a natural gas pipeline would affect the insurance rates of nearby residences.

5.4.2.12 Tax Revenues

Section 5.4.1.13 of this Resource Report contains the relevant information concerning potential tax revenues associated with construction of the Project. Table 5.4-2 contains a summary of projected state tax revenues associated with construction and operation of the Pipeline.

5.4.3 Power Plant Construction

AES is considering the potential collocation of a 300-megawatt natural gas fired combined cycle power plant at the Terminal Site. There will be synergies with the LNG Terminal, such as fuel supply to the combined cycle plant, transfer of cold from the LNG Terminal heat transfer system to the combined cycle process for cooling, and transfer of waste heat from the Power Plant into the LNG heat transfer system for vaporization of the LNG. The Power Plant would require a gas supply from the LNG Terminal and transmission lines leaving the site to tie into the local utility system. The Power Plant will provide the primary power source to the LNG Terminal, and the back up supply will come from the 110 kV utility system. The Power Plant will make additional power supplies available for purchase by BG&E and other consumers and distributors at competitive market prices, will create additional union construction and permanent jobs, will provide additional tax revenues for the local area, will be a "cogeneration" plant whose heat will be used to re-vaporize the LNG at the LNG Terminal, and will be consistent with the policy objectives underlying the Maryland Healthy Air Act of 2006, which

[28] Hansen, et. al. are professors of economics and finance at Western Washington University.

mandates significant reductions in air pollution from certain existing units at coal-fired power plants in Maryland.[29] As more electric power is needed in congested areas of growing demand, clean-burning options such as the Power Plant are environmentally preferred over options with higher air emissions. Accordingly, whether the potential Power Plant displaces existing power generating sources or meets a portion of the increasing demand in the area, net air emissions will be less than would be experienced were a generating option with higher air emissions to fulfill that same demand.

As described in Section 5.4.1.9, due to its remote distance from the Dundalk and Turner Station communities, the physical barriers between the Terminal Site and those communities presented by the Patapsco River and Key Bridge, and fact that no redevelopment / revitalization efforts are planned by either community on or near the Terminal Site, construction and operation of the Project is expected to have no negative impact on the proposed revitalization efforts described in the Dundalk Report or the TSCC Plan. Additionally, the BC Plan identified the area of the proposed Terminal Site as industrial (for purposes of land use), as an industrial employment area (for purposes of development policy), and as high ground with pollution potential (for purposes of environmental policy). The BC Plan also encouraged the re-use of land at Sparrows Point for redevelopment for new industrial purposes. Construction and operation of the potential Power Plant within the Terminal Site would be entirely consistent with the BC Plan both as introduced by an interested party during the FERC scoping process and as currently in place.

5.4.3.1 Estimated Construction Population

During construction, the peak workforce for the Power Plant is expected to be approximately 180 workers. Construction of the Power Plant will take approximately 20 months. The majority of the Power Plant construction workforce will originate locally, while approximately 20 percent of the workforce is expected to temporarily re-locate to the area. Economic impact would be realized in the form of increased revenues for local businesses (e.g., lodging, transportation, retail, services) supporting the increased temporary workforce.

5.4.3.2 Construction Employment and Payroll

A temporary positive impact on local employment is expected to result from construction of the Power Plant. When available, local workers will be employed for construction. Some positions will require specialized skill sets, and where such specialists are unavailable within the local area, employees will come from elsewhere in Maryland, Pennsylvania, Virginia, or other states. It is expected that local workers will be primarily hired for positions such as equipment operators, truck drivers, and general construction labor. Specialized work force will be brought into the region by the prime contractor(s) based on skills needed.

Employment of local construction workers should have a positive effect on unemployment rates during the construction season. As shown in Table 5.2-1, unemployment rates within the affected counties range from 2.0 percent to 4.2 percent. The unemployment rate for Baltimore County, where the Power Plant will be constructed, is above the State and national unemployment rates.

The salary range for the construction jobs associated with construction of the Power Plant is expected to be approximately $25,000 to $150,000 annually. Annual personal income earnings associated with

[29] The Healthy Air Act mandates reductions in carbon dioxide (10 percent cut by 2018), sulfur dioxide (83 percent cut by 2010 and 90 percent by 2015), nitrogen oxides (67 percent cut by 2010 and 80 percent by 2015), and mercury (90 percent cut by 2010) from certain existing units at coal-fired power plants in Maryland. Natural gas plants typically emit 43.7 percent less carbon dioxide, 99.6 percent less sulfur dioxide, 79.8 percent less nitrogen oxide, and 99.7 percent less particulates than coal plants. Natural gas plants also do not emit mercury. A further description of the benefits potentially offered by the Power Plant, including its expected mode of baseload operation, is set forth in Section 1.10 of Resource Report 1, *General Project Description*. Only the most reliable, efficient, and/or cost-effective power plants operate to provide the base of power for the regional electric supply system.

construction of the Power Plant are anticipated to total $18 million, which would generate approximately $30 million in personal income during the approximately 20-month construction period[30]. A summary of the number of positions associated with Power Plant construction, annual salary range, and estimated payroll, is shown in Table 5.3-1. The Baltimore County economy could realize a total indirect economic benefit of approximately $60 million associated with the Power Plant construction period, based upon a conservative effect earnings multiplier of 2.0.

5.4.3.3 Housing

AES anticipates 20 percent of the Power Plant construction workers will temporarily relocate to the area near the Terminal site. Section 5.4.1.3 addresses the potential impact of the LNG Terminal on local housing. That section is equally applicable to construction and operation of the Power Plant.

5.4.3.4 Public Services

Section 5.4.1.4 addresses the potential impact of the LNG Terminal on public services. Generally speaking, that section is equally applicable to construction and operation of the Power Plant in that (i) AES plans to minimize the impact on fire, rescue, and police through training and close cooperation of AES contractors; (ii) AES will require successful contract bidders to contact fire departments and emergency response agencies prior to the start of construction; and (iii) AES does not anticipate that construction of the Power Plant will impact school or healthcare facility operating costs, as it is not anticipated that the non-local workers temporarily working in the Project Area will relocate their families during the construction phase.

With regard to short-term spending, it is expected that the non-local Power Plant construction workforce will stay in lodging with an estimated $110 per night rate[31]. Based on approximately 20 percent of that workforce temporarily relocating to the area nearby the Terminal Site, the cumulative revenue generated in local sales of lodging is anticipated to be approximately $3,960 per night. During the 32 weeks of peak construction period, it is expected that activities associated with the Power Plant construction will generate approximately $633,600 in revenues for hotels alone, excluding food and other incidental purchases. The local taxes paid by these establishments provide some offset of any burden that may be created by the short-term use of public services.

5.4.3.5 Transportation

Section 5.4.1.5 addresses the potential impact of the LNG Terminal on transportation. That section is equally applicable to construction and operation of the Power Plant.

5.4.3.6 Economic Value of Removal of Agriculture/Pasture Land or Timberland from Production

Construction of the Power Plant is expected to have no impact on agricultural/pasture land or timberland production, as the construction will occur in a vacant shipyard. Construction of the Power Plant will result in improvement of the existing, former industrial site.

5.4.3.7 Displacement of Residences or Businesses

No residences or businesses will be displaced by construction of the Power Plant.

5.4.3.8 Impact on Local Tourism

Section 5.4.1.8 addresses the potential impact of the LNG Terminal on local tourism. That section is equally applicable to construction and operation of the Power Plant.

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[30] Annual payroll is estimated based on average number of employees per year, estimated staff profile, and range of salary values for the range of staff positions.

[31] Baltimore County Conference and Visitors Bureau, June 2006

5.4.3.9 Impact on Community Development

Section 5.4.1.9 addresses the potential impact of the LNG Terminal on community development plans. That section is equally applicable to construction and operation of the Power Plant.

5.4.3.10 Materials Purchases

In addition to the construction payroll associated with the Power Plant, the Power Plant will generate new sales tax revenue to state and local governments as a result of the spending of millions of dollars on materials, equipment and supplies.

Power Plant construction materials will be supplied by a wide array of local suppliers. AES expects to obtain many of its products and services from manufacturers and or distributors in the Mid-Atlantic Region. In addition, local retailers will benefit from the general contractor's purchase of materials such as fuel, stone, sand, concrete, etc. Following construction, AES will continue to purchase materials and services for routine operation and maintenance of the Power Plant and its grounds. AES expects construction material purchased, construction payroll and construction worker spending, to result in a positive economic impact on the communities near the Terminal Site.

5.4.3.11 Property Values

Construction and operation of the Power Plant is not anticipated to have any negative impact on property values in the area. The proposed Power Plant would be operated as a clean-burning, natural-gas fired facility. Power plants are currently located in the vicinity of the Terminal Site, and have been historically located throughout the region for many decades. A power plant has historically and is currently located at the Mittal steel plant at Sparrows Point. Its boilers are fueled with No. 6 oil, waste oil and natural gas. Additionally, BG&E operates a power plant across from the Terminal Site, along the Cox Creek. Both of these facilities have been in operation for many years with no reported impact on local property values. Section 5.4.1.11 of this Resource Report contains additional information concerning potential impacts on property values associated with construction and operation of fixed facilities.

5.4.3.12 Homeowner Insurance

As described in section 5.4.1.12, homeowner insurance rates are generally set on a county-wide basis, with individual rate adjustments made to reflect the age and value of the property and the claims record of the owner; insurance rates are not based on the surrounding landscape or structures at the local level. It is not anticipated that the presence of the Power Plant in this already industrialized area would affect the insurance rates of nearby residences.

5.4.3.13 Tax Revenues

Personal income tax rates for 2006 in the State of Maryland range from 2.0 percent to 4.75 percent. The City of Baltimore and the counties of Maryland assess local "piggyback" income taxes at rates between 1.25 percent and 3.2 percent of Maryland taxable personal income. These additional taxes are levied by counties to generate revenue necessary to support local governments. Local personal income tax for Baltimore County is 0.0283 percent.

Property in Maryland is also subject to property tax. Assessments are determined on a fair market value basis, issued by the Department of Assessments and Taxation. Cities and counties can set tax rates at the level they deem necessary to fund governmental services. These rates can increase, decrease, or remain the same from year to year.

AES estimates that construction of the Power Plant will generate taxable spending of $5 million. During the construction period of the Power Plant, $1.5 million in Maryland state sales tax is expected to be generated annually. AES anticipates operation of the Power Plant will generate approximately $3

million in state sales, income, and property taxes annually. These additional revenues, which are broken down in Table 5.4-2, will further boost the positive socioeconomic impact in the Project Area.

5.4.4 Project Operation

The estimated lifecycle of the Project, including the LNG Terminal, the Pipeline, and, if constructed, the Power Plant, is 30 years. A description of the socioeconomic impacts associated with those facilities is described in this Section 5.4.4. Because certain operating characteristics of the DMRF are not expected to be as static as those for the LNG Terminal, the Pipeline, and, if constructed, the Power Plant, a separate description of the operational impacts associated with the DMRF are set forth in Section 5.4.5. The separate description also highlights some of the policy objectives associated with the DMRF.

5.4.4.1 Employment and Payroll

Operations associated with the LNG Terminal and Pipeline are expected to require an estimated 50 full-time positions. Forty-one positions would be created for operation of the LNG Terminal and are anticipated to include the following positions: terminal manager, ship coordinator, maintenance manager and personnel, shift supervisors and operational personnel, instrumentation supervisor and technicians, laborers and ship handlers, clerks and administrative staff. Annual salaries would range from approximately $28,000 to $150,000. The annual payroll for the LNG Terminal would be approximately $3.5 million.

The economic impact analysis (2004) of a similar energy infrastructure project, the Dominion Resources Cove Point LNG facility located in Calvert County Maryland, concluded that a direct effect earnings multiplier of 13.3 would result from operation of the facility. Using a slightly more conservative direct effect multiplier value of 10.0, an economic ripple effect of $35 million could be experienced by the local community during each year of LNG Terminal operation.

Operation of the Pipeline would require a full-time workforce of nine personnel. Pipeline positions include pipeline manager, maintenance positions, accounting and administration. Annual salaries for Pipeline operation positions would range from $30,000 to $100,000, with an annual payroll of approximately $455,000. Again, using a conservative direct effect multiplier assumption of 10.0, operation and maintenance of the Pipeline could have an annual impact of $4.55 million spending in the community.

Operation of the Power Plant would require a full-time workforce of 16 additional personnel. Power Plant positions include administrative staff, operations staff, and maintenance personnel. Annual salaries for Power Plant operation positions would range from $30,000 to $150,000, with an annual payroll of approximately $1.5 million. Based on the direct effect multiplier of 10.0, an estimated annual impact of $15 million in additional spending could result in the local community.

Table 5.3-3 contains a summary of the permanent positions anticipated to be created for operation of the proposed Project.

5.4.4.2 Tax Revenues

Operation of the LNG Terminal, including the DMRF, the Pipeline, and the Power Plant is anticipated to generate a combined average of $16.3 million in Maryland state tax (sales, income, and property) revenues annually over the 30-year anticipated lifecycle of the facilities. AES anticipates the operation of the Pipeline will generate a combined average of $1.02 million in Pennsylvania state sales and income tax revenues over the same period of time. Table 5.4-2 contains a summary of projected state tax revenues associated with operation of the Project facilities.

5.4.4.3 Public Services

Any impact that Project operation may have on public services is anticipated to be negligible. AES plans to minimize the impact on fire, rescue, and police forces through installation of protective instrumentation and control systems, communications and security systems, and fire protection, hazard detection and safety systems at its facilities. AES will develop and implement policies and procedures to assure safe operation of the LNG Terminal and related facilities. AES intends to establish a relationship with the local emergency response organizations to explore and plan timely response options and facilitate response coverage in case of an accident or injury. An important part of these discussions will be the determination of additional resources that may be required, if any, and the allocation of payment responsibilities. AES will work with local emergency response organizations to complete these determinations prior to facility construction.

Additional information concerning safety systems is presented in Resource Report 1, *General Project Description* and Resource Report 11, *Reliability and Safety*. Information relating to marine transit activities, including required resources and allocation of costs therefore, will be determined in the ongoing Waterway Suitability Assessment that is the responsibility of the U.S. Coast Guard.

5.4.5 Dredged Material Recycling Facility Construction and Operation

The Project includes widening and deepening the existing approach channel and turning basin at Sparrows Point to accommodate the larger ships expected at the LNG Terminal than have utilized the existing shipyard, floating dry dock (north of the proposed LNG Terminal) and graving yard/coal channel (south of the proposed LNG Terminal). Depending on final facility design, AES anticipates generating between 3.5 to 4 million cubic yards of dredged materials during the installation of marine facilities and development of channel access to the LNG Terminal.

Currently, the U.S. Army Corps of Engineers dredges a minimum of one-half million cubic yards of material annually from the bottom of the major approach channels and Baltimore Harbor, to maintain these waterways at a depth that will allow safe passage of deep draft commercial vessels. Under current law, this dredged material must be transported for containment at a permitted dredged material containment facility such as Hart-Miller Island (HMI) or Cox Creek, or be beneficially reused through a process identified in Maryland statute as Innovative Reuse. State legislative requirements prohibit placing dredged material at HMI after December 31, 2009. Acceptance of dredged material may be limited as early as 2008 (Federal Register 2005, page 30422). The capacity of the other existing permitted facility at Cox Creek is limited as well, having an annual capacity of only about 500,000 cubic yards.

The Dredged Material Disposal Alternatives Act of 2004 (House Bill 1471, Maryland General Assembly) establishes a program to provide financial assistance for creating beneficial use technologies for dredged material. Goals of the program include fostering beneficial reuse of dredged material, fostering markets for end-use products using dredged materials as a resource, and facilitating the reuse of at least 500,000 cubic yards of dredged material annually.

As part of the Project construction phase, AES will construct the DMRF adjacent to the existing waterway at the Terminal Site. The 10,000 cubic yard per day DMRF will occupy approximately 5.5 acres of upland property within the boundaries of the site; additional acreage will be used for equipment and materials storage, and temporary workspace – these acreages are described in Resource Report 2. This phase will precede actual dredging operations. Additional information concerning dredging activities can be found in Resource Report 1, *General Project Description*.

The DMRF that would facilitate cost-effective reuse (e.g., generate construction materials, environmentally safe fill material, etc.) of materials dredged during the construction of the LNG Terminal and during routine maintenance of channel access thereafter. In addition to managing dredged materials associated with construction and operation of the LNG Terminal, the DMRF could manage materials generated by the Port of Baltimore's maintenance activities, resulting in a cost

effective and environmentally preferable alternative for meeting the State of Maryland's dredged material management needs.

In creating a new DMRF, the dredged material recycling operation would generate additional jobs in the area. Newly created positions would include dredge operators, heavy (earth moving and processing) equipment operators, trucker drivers, and facility managers. During the first two years of implementation, it is anticipated that 41 full-time positions would be needed to dredge, process, and stockpile materials generated by the Project. Salaries associated with these positions (i.e., facility managers, supervisors, mechanics, operators, laborers) would range from $28,000 to $75,000 resulting in an annual payroll of approximately $2.01 million in the first two years of operation.

The recycling operation would require 23 full-time positions for years three and four. Positions and salaries would be similar to those of the first two years of operation. The annual payroll would be approximately $1.14 million for the third and fourth years. Refer to Tables 5.3-1 and 5.3-3 for a summary of this information.

It is assumed that the DMRF would continue as a commercial operation with nine full-time positions to manage the regular operation of the facility, including maintenance of the new channel and turning basin associated with the LNG Terminal. Annual salaries would range from approximately $28,000 for laborers to approximately $75,000 for the facility manager. The estimated annual payroll for the facility would be $411,000. Using a conservative estimate of a 10.0 direct effect earnings multiplier, the local economy could be expected to experience a $4.11 million annual ripple effect during the operational lifecycle of the facility. The multiplier values for employment direct economic impact are also shown in Tables 5.3-1 and 5.3-3.

5.5 Environmental Justice Statement (Executive Order 12898)

This section describes the results of the Environmental Justice analysis prepared for the Project. Consistent with Executive Order 12898 of February 11, 1994, and the accompanying Presidential Memorandum, any disproportionately high and adverse human health or environmental effects of actions on minority and low-income populations must be evaluated and identified (if present); this evaluation is summarized in this section.[32]

The socioeconomic impact area of the Project, i.e., the areas where the additional employment will be based, where additional expenditures will be made, where additional taxes will be paid, and where potential environmental impacts may be felt, is largely urban and the population density is generally high. Table 5.2-1 lists the population densities for the Project Area. While the Project will be constructed in communities of diverse ethnic and economic composition, it is not anticipated to have adverse effects on minority and low-income communities. As shown in Table 5.2-1, the poverty rate for the five counties ranges from 4.9 percent to 7.8 percent. Each of the five counties is below the respective state poverty rate; Maryland's poverty rate is 8.5 percent, and Pennsylvania's poverty rate is 11 percent. The poverty rates of Maryland and Pennsylvania are both below the national average of 12.4 percent (U.S. Census Bureau, Census 2000).

None of the five counties in the Project Area is above its respective state or the national minority population percentages. The minority populations of the states of Maryland and Pennsylvania are 36 percent and 14.6 percent, respectively, and the national minority rate is approximately 25 percent (U.S. Census Bureau, Census 2000). In Maryland's Cecil County, the minority population is 6.6 percent, and in both Baltimore and Harford Counties the minority populations are approximately 25 percent. In Pennsylvania, the minority populations in Lancaster and Chester Counties are 8.5 percent and 10.8

[32] Guidance provided by EPA specifies that minority population issues be addressed when minority populations comprise over 50 percent of an affected area, or when the minority population is substantially greater than the minority percentage in the larger area of the general population.

percent, respectively. Table 5.4-1 illustrates the ethnic composition of the counties where Project facilities will be located.

The residential neighborhood closest to the Terminal Site is Turner Station, which is located approximately 1.1 miles from the Terminal Site. Demographic information from the Census 2000 indicates that the population of Turner Station is approximately 3,301. Eighty percent of the population is African American, 16 percent is white, and 4 percent is other. The median household income is $28,324. Turner Station forms a part of the larger Dundalk community.

Dundalk is a transitioning community that grew around the industrial complex of steelmaking, shipbuilding, military (the U.S. Army's Camp Holabird), distilling, automobile and other manufacturing, throughout the 20th century. Many residents of the Dundalk community have connections to industries now in decline. For example, steelmaking now accounts for 2,500 direct jobs, down from approximately 28,000 at its peak a half century ago. There are examples where - as industry has withdrawn - pensions and health care benefits have eroded for many individuals who drew their livelihood from industry. The resulting sentiment that industry has abandoned the community is generating a belief that industrial areas are likely to be transformed into residential and recreational uses in the near term. This sentiment is inconsistent with Baltimore County's master plan and local zoning. The Project proposed by AES may stimulate spin-off industrial and commercial activities that should provide new employment opportunities for the current residents of Dundalk.

These key communities and their locations relative to the Terminal Site are shown on Figure 5.4-1

5.5.1 Terminal Site

Avoidance of issues of environmental justice was an important factor in AES's selection criteria for the Terminal Site. Construction of facilities on the Terminal Site involves development on a parcel of land that is located within a larger industrial complex. The Sparrows Point Industrial Complex, which has remained vacant for a number of years, has been utilized for shipbuilding and other industrial activities since the Sparrows Point Shipyard was originally constructed in 1889. Both the BC Plan as introduced by an interested party during the FERC scoping process and the updated Baltimore County Master Plan identify the area of the Terminal Site and significant acreage surrounding the Terminal Site as open for industrial use or re-use for redevelopment for new industrial purposes. Further, the nearest residential area is more than one mile away from the Terminal Site and is separated from the Terminal Site by the physical barrier of the Key Bridge and I-695, and a sound barrier that borders the community along Broening Highway. Finally, the environmental impacts associated with the LNG Terminal and, if constructed, the Power Plant, have been demonstrated in other Resource Reports to have no adverse human health or environmental effects on all surrounding populations, including minority and low-income communities or Native American programs.

With specific regard to dredging activities, such activities are routinely conducted in basins and channels in the Project Area under conditions of a dredge maintenance permit. Proposed dredging activities in the approach channel and turning basin do not represent increased risk to environmental and human health in any areas adjacent to those activities, as AES will ensure the use of a dredging methodology suitable for the level of chemical constituents contained in the sediments.

Because facilities proposed to be located on the Terminal Site will have no human health or environmental effects on the communities closest to the Terminal Site or on any reference community, all environmental justice concerns have been addressed. In other words, the facilities proposed to be located on the Terminal Site are not anticipated to have disproportionately adverse human health or environmental effects on minority and low-income communities or Native American programs.

5.5.2 Pipeline Route

Routes for Pipeline construction have been carefully selected so as to minimize, to the extent practicable, adverse impact to landowners and other stakeholders. In this manner, similar to the

selection process associated with the Terminal Site, AES proactively sought to avoid environmental justice issues. Specifically, in selecting the proposed route for the Pipeline, AES sought to avoid and minimize potential impacts to natural resources present within the area of the Pipeline Route, as well as to avoid to the maximum extent practicable impacts to landowners and other stakeholders. Using these criteria, AES selected a route that maximizes the use of existing utility and highway rights-of-way, thereby minimizing potential impacts to individual landowners and previously undisturbed lands. Alternate route segments that were reviewed were considered less desirable than the primary route selected, because the alternate route corridor is already occupied by two powerline lattice tower alignments, and one to two pipelines. The alternate route is also more densely populated and construction activities along that route would disrupt more landowners than would construction along the primary route. The alternate route segments also required routing along segments of interstate highways (Routes I-695 north and I-95 east) that are being widened and reconstructed over the next few years, involving greater distance, and disturbance of a greater amount of "greenfield" property.

As addressed in the other Resource Reports supporting this application, the environmental impacts associated with the Pipeline are temporary and will not have a significant long term impact. Accordingly, the proposed Pipeline does not have disproportionately adverse human health or environmental effects on minority and low-income communities or Native American programs.

5.5.3 Community Involvement

AES has and will continue to coordinate with all stakeholders potentially affected by the Project to address both agency and community concerns, and to incorporate appropriate mitigation measures into design and construction activities to offset potential impacts as they are identified. Specifically, in developing the Project, AES has had numerous in-person discussions, telephone conferences, and written consultations with various local, state, and Federal regulatory agencies (see Resource Report 1, *General Project Description*). This coordination is expected to continue throughout the development and construction of the Project. More importantly, AES has performed extensive outreach to residential communities near the Terminal Site and along the Pipeline Route, and has specifically included recreational and commercial users of the waterways, and the environmental community. This outreach has included, among other things, numerous publicly announced meetings (both as required by the Commission's regulations and in addition to such required meetings), delivery of updates on the Project, invitations to tours and learning opportunities about LNG terminal and shipping issues, and issuance of over 2,200 letters to landowners and stakeholders. One objective of this broad outreach has been the generation of meaningful public comment into the process at an early stage in order that the project application can best address and resolve stakeholder concerns and issues, and that information on those issues can be provided to stakeholders. As evidenced by the very strong public participation and informed comment in both the FERC-required open house meetings and the FERC scoping meetings, AES believes this objective is being met. A summary of AES's community outreach efforts is included in Table 1.8-2 of Resource Report 1, *General Project Description*. In addition, in exceedance of the Commission's requirements under 18 CFR §157.6(d), letters have been sent to landowners within one mile of the Terminal Site (note there are no residential areas within one mile of the Terminal Site), and letters have been sent to landowners on and abutting the proposed primary and alternative segments of the Pipeline Route. AES will continue to perform such outreach and will notify affected landowners whose property is crossed or otherwise affected by the Project facilities. The landowners and street addresses of the affected properties are included in Resource Report 1, *General Project Description,* Appendix 1B.

5.6 References

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